

CLAIMS

Please amend the claims as follows:

1. (original) A melt phase process for making a polyester polymer melt phase product containing at least 100 ppm antimony based on the weight of the product comprising adding an antimony containing catalyst to the melt phase; polycondensing a melt containing said catalyst in a polycondensation zone; and before the It.V. of the melt reaches 0.45 dL/g, continuously polycondensing the melt in the polycondensation zone at a temperature within a range of 265°C to 305°C or at sub-atmospheric pressure or a combination thereof, in each case until the It.V. of the melt reaches at least 0.75 dL/g; wherein the polyester polymer melt phase product has a b* color of -5 to +5.

2. (original) The process of claim 1, wherein said polyester polymer melt phase product comprises :

(a) a carboxylic acid component comprising at least 60 mole% of the residues of terephthalic acid, derivatives of terephthalic acid, naphthalene-2,6-dicarboxylic acid, derivatives of naphthalene-2,6-dicarboxylic acid, or mixtures thereof, and

(b) a hydroxyl component comprising at least 60 mole% of the residues of ethylene glycol,

based on 100 mole percent of carboxylic acid component residues and 100 mole percent of hydroxyl component residues in the polyester polymer melt phase product.

3. (original) The process of claim 2, wherein the polyester polymer melt phase product comprises:

(a) a carboxylic acid component comprising at least 60 mole% of the residues of terephthalic acid or derivatives of terephthalic acid, based on 100 mole percent of carboxylic acid component residues in the product.

4. (original) The process of claim 3, wherein the polyester polymer melt phase product comprises:

(a) a carboxylic acid component comprising at least 92 mole% of the residues of terephthalic acid or derivatives of terephthalic acid, and

(b) a hydroxyl component comprising at least 92 mole% of the residues of ethylene glycol,

based on 100 mole percent of carboxylic acid component residues and 100 mole percent of hydroxyl component residues in the polyester polymer melt phase product.

5. (original) The process of claim 1, wherein the polycondensation reaction in the polycondensation zone is conducted in the absence of active catalysts containing titanium.

6. (original) The process of claim 5, wherein the melt phase process is conducted in the absence of added catalyst compounds containing titanium.

7. (original) The process of claim 6, wherein the melt phase product contains 180 ppm to 500 ppm antimony.

8. (original) The process of claim 1, wherein said polycondensation reaction is conducted for less than 100 minutes in a finishing zone.

9. (original) The process of claim 8, wherein said polycondensation reaction is conducted for 80 minutes or less in a finishing zone.

10. (original) The process of claim 1, comprising adding a phosphorus containing compound.

11. (original) The process of claim 10, wherein the phosphorous containing compound is added at a molar ratio of P:Sb of at least 0.025:1.

12. (original) The process of claim 1, comprising adding bluing toners to the melt phase.

13. (original) The process of claim 1, wherein said product has an L* of at least 70.

14. (original) The process of claim 13, wherein the L* color of the melt phase product is at least 74, and the b* color is between -5 and +4.

15. (original) The process of claim 1, wherein said polycondensation reaction in the polycondensation zone is conducted at a temperature of 280°C or more.

16. (original) The process of claim 15, wherein the product has an L* of at least 76 and the b* color is between -5 and +4.

17. (Canceled)

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40. (original) A process for making a polyester polymer comprising polycondensing a melt in the presence of an antimony-containing catalyst to produce a melt phase product, wherein the reaction time of the melt between an It.V. of 0.45 dL/g to and It.V. ranging from 0.70 dL/g to 0.90 dL/g is 100 minutes or less.

41. (original) The process of claim 40, wherein a pressure applied between said range is about 2 mm Hg or less.

42. (original) The process of claim 40, wherein the melt phase product produced by said process has a b* within a range of -5 to +5.

43. (original) The process of claim 40, wherein the polyester polymer has an It.V. of at least 0.75 dL/g.

44. (original) The process of claim 40, wherein the reaction time of the melt between an It.V. of about 0.3 dL/g and an It.V. in the range of 0.70 dL/g to 0.90 dL/g is 100 minutes or less.

45. (original) The process of claim 40, wherein the time is 80 minutes or less.

46. (original) A polyester polymer melt phase product having a degree of crystallinity of at least 25% and an It.V. of at least 0.70 dL/g without solid state polymerizing the polymer, said product comprising antimony residues and having a b* color of -5 to +5 and an L* of at least 70.

47. (original) The product of claim 46, wherein the polymer is substantially free of titanium residues.

48. (original) The product of claim 46, wherein the L* is at least 74.

49. (original) The product of claim 46, wherein the degree of crystallinity is at least 30%.

50. (original) The product of claim 46, wherein the It.V. of the melt phase product is at least 0.75 dL/g.

51. (original) A melt phase process for making a polyester polymer melt phase product comprising adding an antimony containing catalyst to the melt phase, polycondensing a melt containing said catalyst in the melt phase until the It.V. of the melt reaches at least 0.75 dL/g.

52. (original) The process of claim 51, wherein the polyester polymer melt phase product comprises:

(a) a carboxylic acid component comprising at least 60 mole% of the residues of terephthalic acid or derivatives of terephthalic acid, based on 100 mole percent of carboxylic acid component residues in the product.

53. (original) The process of claim 51, wherein the polyester polymer melt phase product comprises:

(a) a carboxylic acid component comprising at least 92 mole% of the residues of terephthalic acid or derivatives of terephthalic acid, and

(b) a hydroxyl component comprising at least 92 mole% of the residues of ethylene glycol,

based on 100 mole percent of carboxylic acid component residues and 100 mole percent of hydroxyl component residues in the polyester polymer melt phase product.

54. (original) The process of claim 51, wherein the polycondensation reaction in the polycondensation zone is conducted in the absence of active catalysts containing titanium.

55. (original) The process of claim 51, wherein the melt phase process is conducted in the absence of added catalyst compounds containing titanium.

56. (original) The process of claim 55, wherein the melt phase product contains 180 ppm to 500 ppm antimony.

57. (original) The process of claim 51, wherein said polycondensation reaction is conducted for less than 100 minutes in a finishing zone.

58. (original) The process of claim 57, wherein said polycondensation reaction is conducted for 80 minutes or less in a finishing zone.

59. (original) The process of claim 51, comprising adding a phosphorus containing compound.

60. (original) The process of claim 59, wherein the phosphorous containing compound is added at a molar ratio of P:Sb of at least 0.025:1.

61. (original) The process of claim 51, comprising adding bluing toners to the melt phase.

62. (original) The process of claim 51, wherein said product has an L* of at least 70.

63. (original) The process of claim 62, wherein the L* color of the melt phase product is at least 74, and the b* color is between -5 and +4.

64. (original) The process of claim 51, wherein said polycondensation reaction in the polycondensation zone is conducted at a temperature of 280°C or more.

65. (original) The process of claim 64, wherein the product has an L* of at least 76 and the b* color is between -5 and +4.

66. (Canceled)

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- 67. (Canceled)
- 68. (Canceled)
- 69. (Canceled)
- 70. (Canceled)
- 71. (Canceled)
- 72. (Canceled)
- 73. (Canceled)
- 74. (Canceled)
- 75. (Canceled)
- 76. (Canceled)
- 77. (Canceled)